UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Office of Chemical Safety and Pollution Prevention

MEMORANDUM **February 15, 2015**

SUBJECT: Ecotoxicity Assessment for Dry Fly Attractant

EPA Reg. #:	89459-RR
DP#	420501
Decision #	491257
Chemical Class	Biochemical

FROM: Miachel Rexrode, Ph.D., Senior Biologist /s/ 02/15/2015
Biochemical Pesticides Branch
Biopesticide & Pollution Prevention Division (7511P)

TO: Menyon Adams, Regulatory Action Leader /s/
Biochemical Pesticides Branch
Biopesticide & Pollution Prevention Division (7511P)

ACTION REQUESTED

The applicant, Central Garden & Pet Co., has submitted an application for the registration of RF2182 Dry Fly Attractant, a biochemical attractant end-use product used in conjunction with various traps to control house flies and other filth flies around stables, commercial dairies, feedlots and other farm areas. This end use product is formulated with three active ingredients Indole, Trimethylamine, and Putrescent Whole Egg solids. Trimethylamine is a new active ingredient. The applicant has submitted data matrices for Indole, Trimethylamine, and Putrescent Whole Eggs, a draft master label, and Confidential Statement of Formulation (CSF), as well as, data waiver request for toxicology requirements and nontarget ecological testing.

RECOMMENDATIONS AND CONCLUSIONS

Background

Putrescent Whole Egg Solids

The Agency believes there is a category of pesticides for which a greatly reduced set of data requirements are appropriate. Such pesticides may be exempt from the usual generic data requirements for toxicology, residue chemistry, human exposure, ecological effects and environmental fate, without compromising human health or environmental safety. The RED (21T-100x June 1992) states that Putrescent Whole Egg Solids are in this category of pesticides, and EPA has waived most of the generic data requirements for their reregistration. Putrescent Whole Egg Solids (including inedible egg powder, dried whole egg and powdered inedible egg solids) are produced from eggs that the U.S. Department of Agriculture has declared inedible for human consumption due to cracked shells or imperfections. They are, therefore, a natural product, high in protein, fat, vitamins and minerals. Used as pesticides, Putrescent Whole Egg Solids have a non-toxic mode of action for repelling animals. They are presumed to be non-persistent since they are organic and are known to rapidly degrade in the environment. EPA has received no reports of adverse effects resulting from their use and the Agency believes that no significant adverse effects to the environment are associated with the use of putrescent whole egg solids as pesticides. PWES are exempt from the requirement of a tolerance under 40 CFR 180.1071(a):

(Z)-9-Tricosene

(Z)-9-Tricosene is a semiochemical that acts as a mating pheromone in the house fly (*Musca domestica*). It is naturally synthesized from nervonic acid in epidermal microsomes of the female house fly and deposited in the cuticular waxes and in the feces (Carlson *et. al.*, 1971; Reed *et. al.*, 1994). Naturally occurring semiochemicals, such as (Z)-9-Tricosene, are ubiquitous in the environment (see review by Jones, 2012) and are produced whenever arthropods are mating.

Indole

Indole-3-butyric acid (IBA) is a synthetic plant growth regulator that acts on cell division and cell elongation in order to stimulate root development to herbaceous and woody plant cuttings prior to planting in various propagation media. IBA is also used alone or in combination with other active ingredients on fruit and vegetable crops, field crops and ornamental turf to promote growth development of flowers and fruit and to increase crop yields. IBA has been classified as a biochemical pesticide because it is similar in structure and function to the naturally-occurring plant growth hormone indole-3-acetic acid (IAA).

Waiver Request

Waiver Request for Toxicological Data on RF2182 Dry Fly Attractant
Acute Oral 870.1100, Acute Dermal 870.1200, Acute Inhalation 870.1300, Acute Eye Irritation 870.2400, Acute Skin Irritation 870.2500, and Skin Sensitization 870.2600.
Agency Response: Acceptable

Waiver Request for Toxicological Data on Indole
The applicant has also presented rationale that could be used for waivers on the following acute studies: Acute Inhalation (870.1300) and Skin Sensitization (870.2600).

The applicant has also presented rationale that could be used for waivers on the following subchronic studies: Subchronic Oral (OCSPP 870.3100), Subchronic Dermal (OCSPP 870.3250), Subchronic Inhalation (OCSPP 870.3465), Prenatal Developmental toxicity (OCSPP 870.3700), Bacterial Reverse Mutation Test (OCSPP 870.5100) and *in vitro* mammalian cell assay (OCSPP 870.5375). The rationale that the applicant provided notes that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure.
Agency Response: Acceptable

Waiver Request for Toxicological Data on Trimethylamine
Since the proposed use of trimethylamine as an attractant in fly traps precludes contact with skin, a waiver is requested for Skin Sensitization 870.2600.

The applicant has also asked for waivers on the following studies: Subchronic Oral (OCSPP 870.3100), Subchronic Dermal (OCSPP 870.3250), Subchronic Inhalation (OCSPP 870.3465), Prenatal Developmental toxicity (OCSPP 870.3700), Bacterial Reverse Mutation Test (OCSPP 870.5100) and *in vitro* mammalian cell assay (OCSPP 870.5375). The rationale that the applicant provided notes that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure.
Agency Response: Acceptable

Waiver Request for Toxicological Data on Putrescent Whole Egg solids
The EPA reviewed the Putrescent Whole Egg Solids registration in 1992 and 2012 (EPA 1992 and 2011) as part of the Registration Review and concluded that the Agency will continue to waive generic toxicology data requirements. The applicant also provided rationale that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure. The waived data includes the following: Acute Oral 870.1100, Acute Dermal 870.1200, Acute Eye Irritation 870.2400, Acute Inhalation (870.1300), acute dermal irritation 870.2500, Skin Sensitization (870.2600), Subchronic Oral (OCSPP 870.3100), Subchronic Dermal (OCSPP 870.3250), Subchronic Inhalation (OCSPP 870.3465), Prenatal Developmental toxicity (OCSPP 870.3700), Bacterial Reverse Mutation Test (OCSPP 870.5100) and *in vitro* mammalian cell assay (OCSPP 870.5375).
Agency Response: Acceptable

Waiver Request for Nontarget Testing on Indole, Trimethylamine, and Putrescent Whole Egg solids
Avian Acute Oral 850.2100, Avian Dietary 850.2200, Fish Acute Toxicity 850.1075, Acute Aquatic Invertebrate 850.1010, Terrestrial Plant Toxicity 850.4100 and 4150, Nontarget Insect 880.4350.
Agency Response: Acceptable

Deficiencies:
Since Indole, Putrescent Egg Solids, and Trimethylamine are from unregistered sources, the applicant is required to produce data for UV/Visible light absorption 830.7050 for each active ingredient.

II) PHYSICAL/CHEMICAL PROPERTIES (OCSPP 830.6000/7000)

Results: The physical/chemical characteristics of Indole, Trimethylamine, and Putrescent Egg Solids are provided in Tables 1.0 – 3.0

Table 1.0. Physical and Chemical Properties for Indole			
Guideline Reference No./Property		Description of Result	Methods/Reference
830.6302	Color	White	Visual observation at room temperature/Toxnet/HSDB
830.6303	Physical State	Crystalline solid	Visual observation at room temperature/Toxnet/HSDB
830.6304	Odor	Dilute: jasmine or flowery Concentrated: fecal	Toxnet/HSDB
830.6313	Stability	1 yr Stable when stored in tightly sealed package in dry location away from direct heat or light (46-90^0 F).	MRID 49375301
830.6314	Oxidation/Reduction: Chemical Incompatibility	Not applicable for biochemical pesticides.	
830.6315	Flammability	Does not contain combustible liquids.	
830.6317	Storage Stability	1 year. Stable when stored in tightly sealed package in dry location away from direct heat or light (46-90^0 F).	
830.6319	Miscibility	Not applicable, the product is not an emulsifiable liquid and is not to be diluted with petroleum solvents.	
830.6320	Corrosion Characteristics	EP: in progress.	
830.6321	Dielectric Breakdown Voltage	Not applicable.	
830.7000	pH	5.9 (20^0 C)	Acros Organic Safety Data Sheet.
830.7100	Viscosity	EP: Not Applicable EP is solid Not required for TGAI.	
830.7050	UV/Visible light absorption	**Required**	
830.7200	Melting Range	52^0 C	Toxnet/HSDB
830.7220	Boiling Range	254^0 C	Toxnet/HSDB
830.7300	Density/Relative Density/Bulk Density	1.22 g/cc	Toxnet/HSDB
830.7520	Particle size, fiber length, and diameter distribution	Not applicable.. .	
830.7370	Dissociation Constant in Water	2.4 (pka) .	Toxnet/HSDB
830.7550	Partition Coefficient	TGAI2.14 (log Kow)	MRID 49375301
830.7840	Water Solubility	3560 mg/l	Toxnet/HSDB
830.7950	Vapor Pressure	0.0122 mg Hg @ 25^0 C	Toxnet/HSDB

<u>Deficiencies:</u> Since this is an unregistered source the applicant is required to produce data for UV/Visible light absorption 830.7050

Table 2.0. Physical and Chemical Properties for Trimethylamine			
Guideline Reference No./Property		**Description of Result**	**Methods/Reference**
830.6302	Color	White	Toxnet/HSDB/Esprix COA
830.6303	Physical State	Crystalline solid	Toxnet/HSDB/ Esprix COA
830.6304	Odor	Strong "fishy" odor in low concentrations and an ammonia-like odor at higher concentrations	Toxnet/HSDB
830.6313	Stability	Stable when stored in tightly sealed package in dry location away from direct heat or light (46-90^0 F).	MRID 49375301
830.6314	Oxidation/Reduction: Chemical Incompatibility	Not applicable for biochemical pesticides.	
830.6315	Flammability	Does not contain combustible liquids.	
830.6317	Storage Stability	1 year. Stable when stored in tightly sealed package in dry location away from direct heat or light (46-90^0 F).	MRID 49375301
830.6319	Miscibility	Not applicable, the product is not an emulsifiable liquid and is not to be diluted with petroleum solvents.	
830.6320	Corrosion Characteristics	EP: in progress.	
830.7000	pH	4.5 – 6.5 (20^0 C)	MRID 49375301
830.7100	Viscosity	EP: Not Applicable EP is solid Not required for TGAI.	
830.7050	UV/Visible light absorption	**Required for TGAI**	
830.7200	Melting Range	277 – 283^0 C	MRID 49375301
830.7220	Boiling Range	Not applicable.	
830.7300	Density/Relative Density/Bulk Density	1.04 g/cc @ 20^0 C	Toxnet/HSDB
830.7520	Particle size, fiber length, and diameter distribution	Not applicable.. .	
830.7370	Dissociation Constant in Water	2.4 (pka) .	Toxnet/HSDB
830.7550	Partition Coefficient	2.73 (log Kow)	Toxnet/Chem
830.7840	Water Solubility	1.00E + 06 mg/L @ 25^0 C	Toxnet/Chem
830.7950	Vapor Pressure	1.66E-06 mg Hg @ 25^0 C	Toxnet/Chem

<u>Deficiencies:</u> Since this is an unregistered source the applicant is required to produce data for UV/Visible light absorption 830.7050

Table 3.0. Physical and Chemical Properties for Putrescent Egg Solids			
Guideline Reference No./Property		Description of Result	Methods/Reference
830.6302	Color	Orange-beige-light brown	MRID 42072103
830.6303	Physical State	powder	MRID 42072103
830.6304	Odor	Malty	MRID 42072103
830.6313	Stability	Stable when stored in tightly sealed package in dry location away from direct heat or light (46-90^0 F).	MRID 42072103
830.6314	Oxidation/Reduction: Chemical Incompatibility	Not applicable for biochemical pesticides.	
830.6315	Flammability	Does not contain combustible liquids.	
830.6317	Storage Stability	EP: in progress.	MRID 42072103
830.6319	Miscibility	Not applicable, the product is not an emulsifiable liquid and is not to be diluted with petroleum solvents.	
830.6320	Corrosion Characteristics	EP: in progress.	
830.7000	pH	6.4 (10 % solution)	MRID 42072103
830.7100	Viscosity	EP: Not Applicable EP is solid Not required for TGAI.	
830.7050	UV/Visible light absorption	**Required for TGAI**	
830.7200	Melting Range	When heat is applied to the substance there is a gradual change in color from light to brown/black. There is decomposition before melting can be observed.	Registration Review EPA-HQ-OPP-2010-0726
830.7220	Boiling Range	Not applicable.	
830.7300	Density/Relative Density/Bulk Density	0.514 g/cc @ 20^0 C	MRID 42072103
830.7520	Particle size, fiber length, and diameter distribution	Not applicable.	
830.7370	Dissociation Constant in Water	Not applicable	
830.7550	Partition Coefficient	Not anticipated as being needed to be required based on known physical and chemical properties of the ai.	Registration Review EPA-HQ-OPP-2010-0726
830.7840	Water Solubility	Insoluble	MRID 42072103
830.7950	Vapor Pressure	Not applicable.	

<u>Deficiencies:</u> Since this is an unregistered source the applicant is required to produce data for UV/Visible light absorption 830.7050

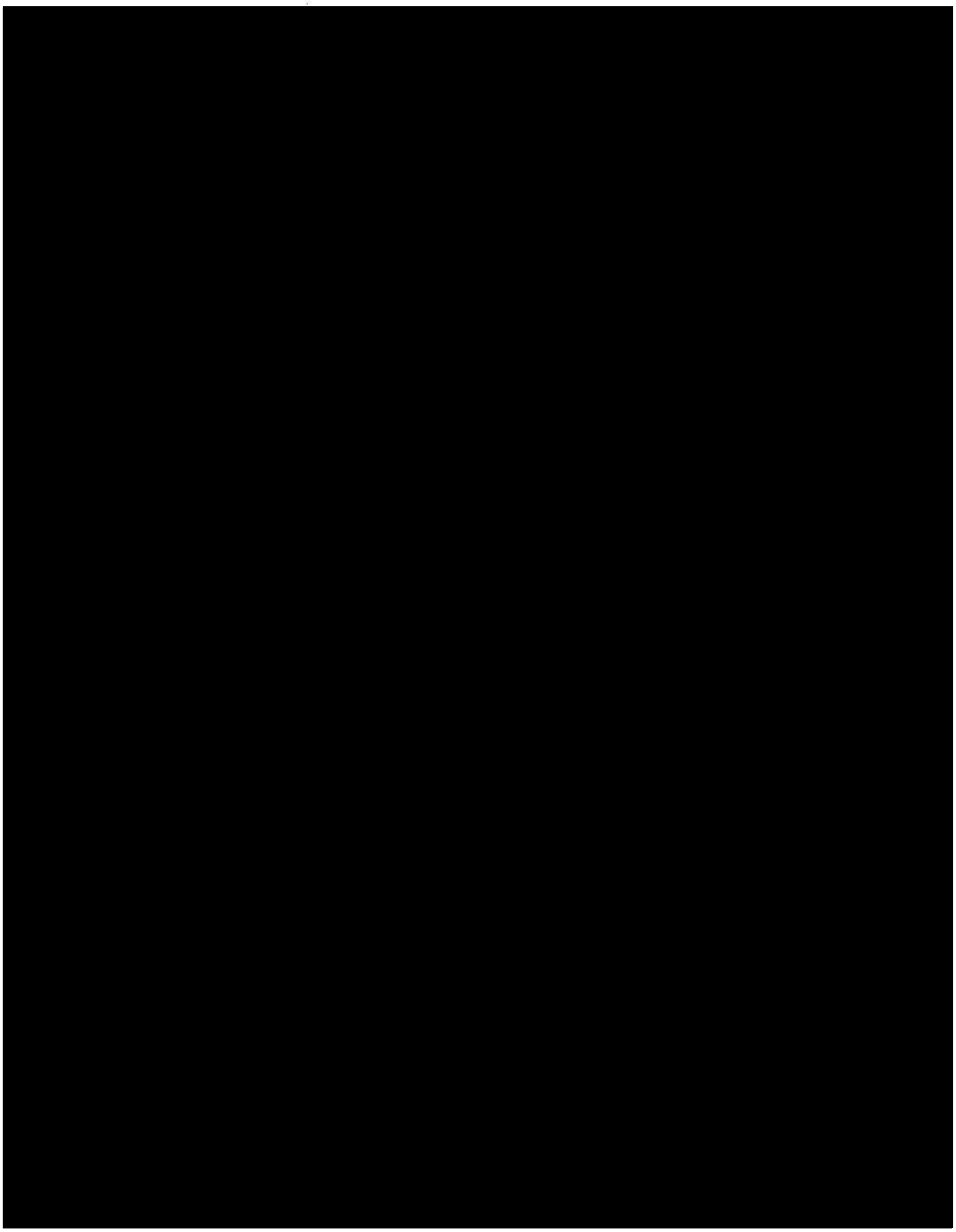
Table 4.0. Physical and Chemical Properties for RF2182 Dry Fly Attractant			
Guideline Reference No./Property		Description of Result	Reference
830.6302	Color	Off-white	MRID 49375302
830.6303	Physical State	Granular solid	MRID 49375302
830.6304	Odor	Fish like	MRID 49375302
830.6313	Stability	In progress	MRID 49375302
830.6314	Oxidation/Reduction: Chemical Incompatibility	Not applicable for biochemical pesticides.	
830.6315	Flammability	Does not contain combustible liquids. NA	
830.6317	Storage Stability	In progress as part of RF2182 Dry Fly Attractant.	MRID 49375302
830.6319	Miscibility	NA	
830.6320	Corrosion Characteristics	In progress as part of RF2182 Dry Fly Attractant.	
830.7000	pH	NA	MRID 49375302
830.7100	Viscosity	NA for EP (solid)	
830.7050	UV/Visible light absorption	NA	
830.7200	Melting Range	Turns dark and decomposes before melting	
830.7220	Boiling Range	NA	
830.7300	Density/Relative Density/Bulk Density	0.77 g/cc @ 20^0 C	MRID 49375302
830.7520	Particle size, fiber length, and diameter distribution	NA	
830.7370	Dissociation Constant in Water	NA	
830.7550	Partition Coefficient	NA	
830.7840	Water Solubility	NA	MRID 49375302
830.7950	Vapor Pressure	NA	

Formulation Process (880.1200)

This procedure is for a batch process. Ingredients are listed in order of addition.

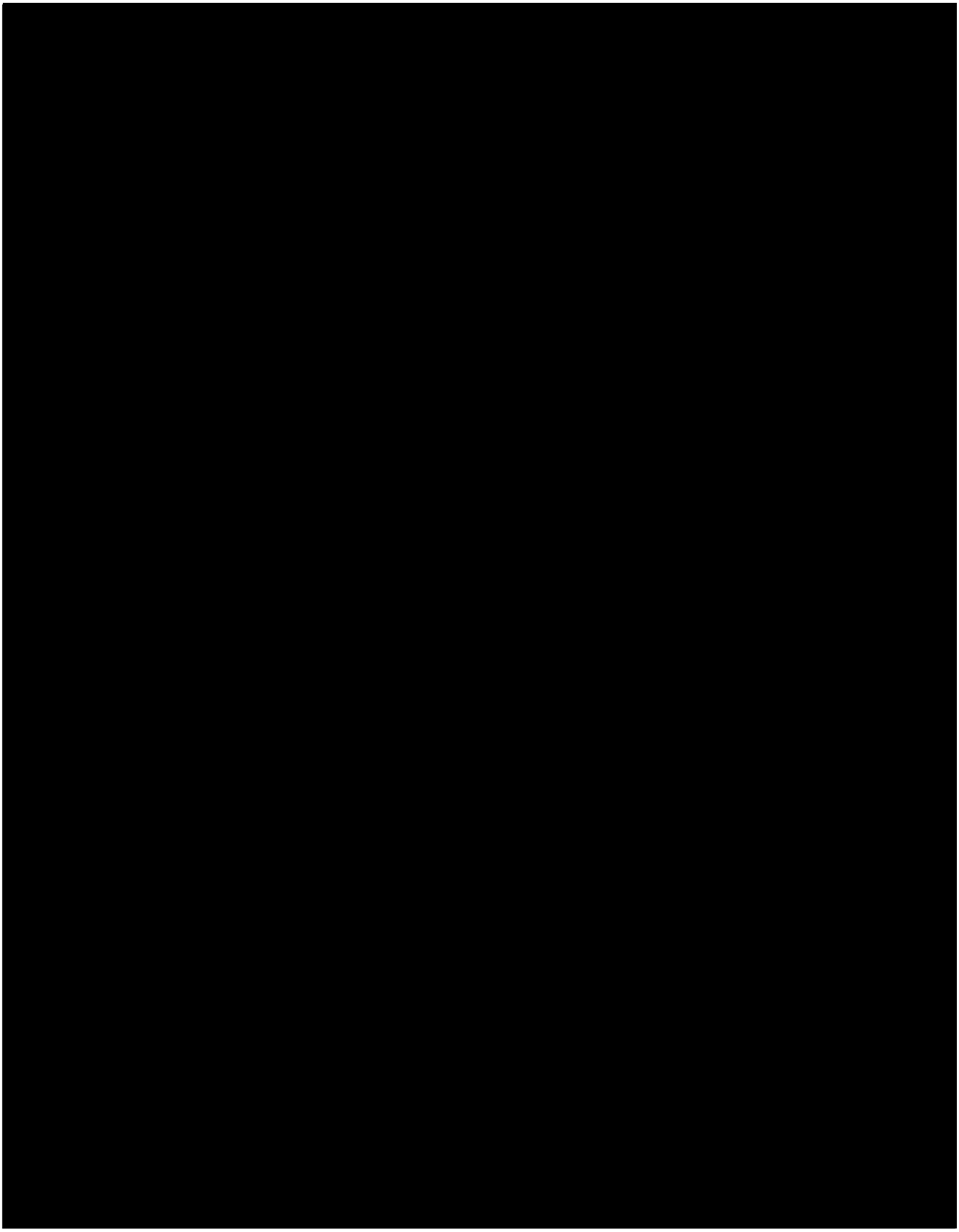
[redacted]

Manufacturing process information may be entitled to confidential treatment

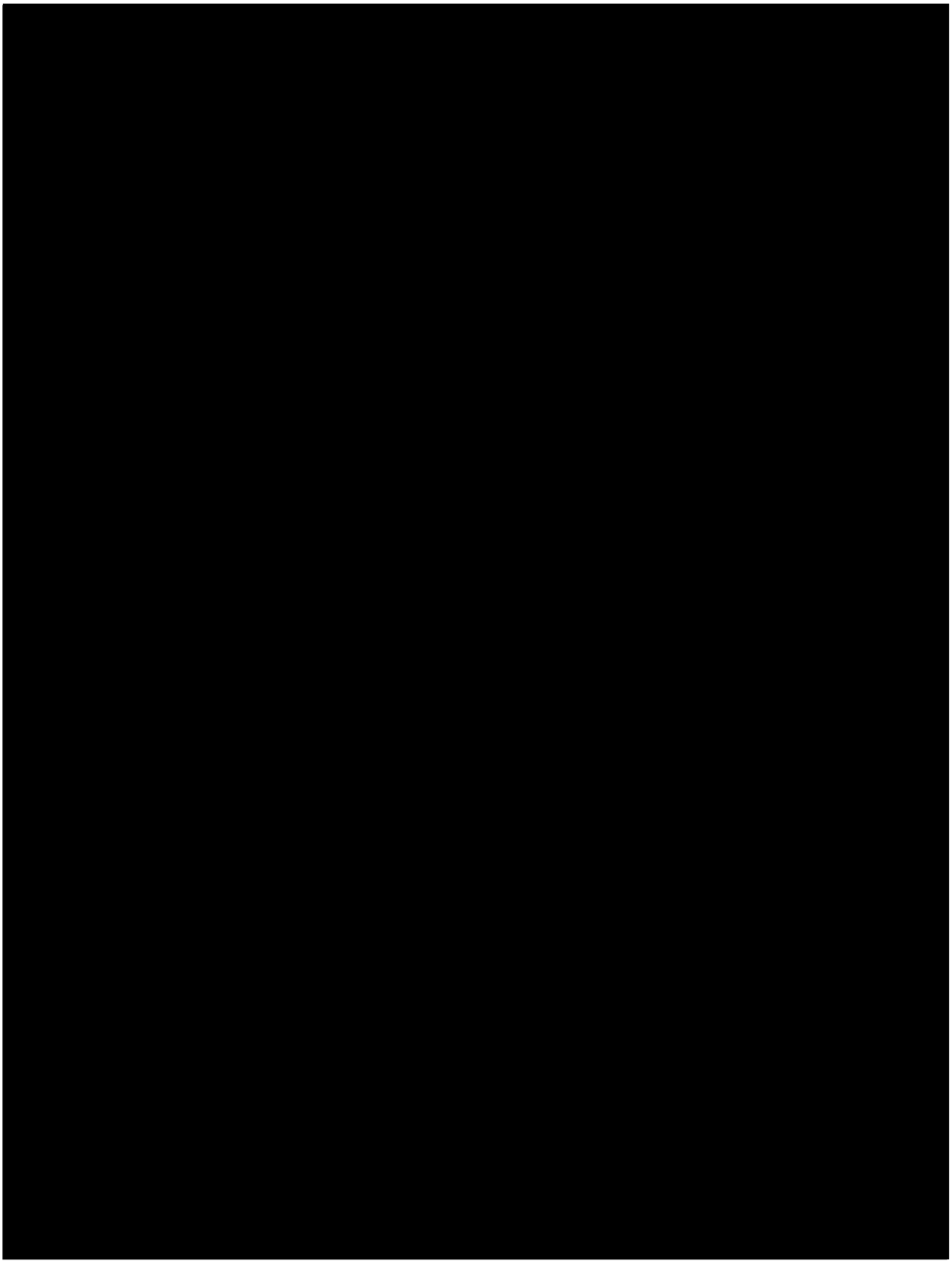


Manufacturing process information may be entitled to confidential treatment

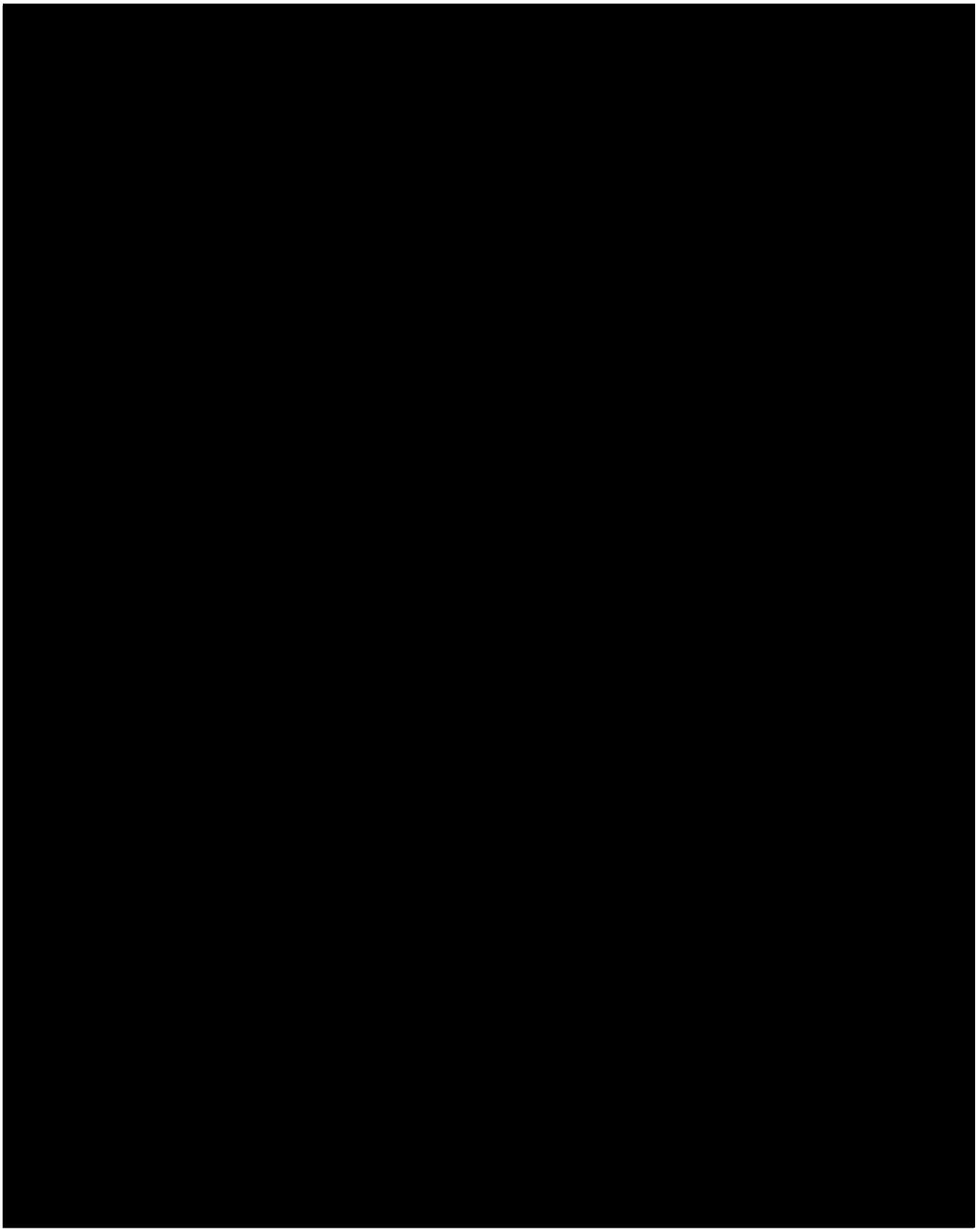
Manufacturing process information may be entitled to confidential treatment



Manufacturing process information may be entitled to confidential treatment



Manufacturing process information may be entitled to confidential treatment



Enforcement Analytical Method (OCSPP 830.1800)
This guideline requirement is satisfied by the report to be found in MRID 49375302 of this application.

III) TOXICOLOGY

Toxicology: Indole-3-Butaric Acid
Toxicology data submitted by the applicant (Table 7.0) shows that Indole-3-Butaric acid has an Acute Oral toxicity of LD_{50} = 1,000 mg/kg (Tox Category III), Acute Dermal LD_{50} = 790 mg/kg (Tox. Category II), Acute Eye Irritation showed corneal involvement and irritation clearing in 8-21 days (Tox. Category II), and Acute Dermal Irritation showed no irritation at 72 hours (Tox. Category IV).

Since the proposed use of Indole is as an attractant in fly traps will result in no direct contact with skin and little or no inhalation exposure, the applicant has asked for waivers on the following acute studies: Acute Inhalation (870.1300) and Skin Sensitization (870.2600). **The waiver rationales and acute toxicity profile for Indole-3-Butaric Acid are sufficient to grant waivers**

The applicant has also presented rationale that could be used for waivers on the following subchronic studies: Subchronic Oral (OCSPP 870.3100), Subchronic Dermal (OCSPP 870.3250), Subchronic Inhalation (OCSPP 870.3465), Prenatal Developmental toxicity (OCSPP 870.3700), Bacterial Reverse Mutation Test (OCSPP 870.5100) and *in vitro* mammalian cell assay (OCSPP 870.5375). The rationale that the applicant provided notes that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure. **The waiver rationales and acute toxicity profile for Indole-3-Butaric Acid are sufficient to grant waivers for the studies noted above.**

Table 7.0. Acute Toxicological Values for Indole-3-Butaric Acid

Guideline	Study	Results	Toxicity Category	MRID #
870.1100	Acute Oral toxicity (rat)	LD_{50} = 1,000 mg/kg	III	49375305
870.1200	Acute Dermal Toxicity (rabbit)	LD_{50}=790 mg/kg	II	49375305
870.1300	Acute Inhalation Toxicity (rat)	Waiver request Acceptable		49375305
870.2400	Primary Eye Irritation (rabbit)	Severe eye irritant clearing in 8-21 days	II	49375305
870.2500	Primary Dermal Irritation (rabbit)	Waiver request Acceptable		49375305

Guideline	Study	Results	Toxicity Category	MRID #
870.2600	Skin Sensitization	Waiver request Acceptable		49375305
870.3050	90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3100	90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3250	90-Day Inhalation -rat	Waiver Request Acceptable		49375305
870.3700	Prenatal developmental	Waiver Request Acceptable		49375305
870.5100	Bacterial reverse Mutation	Waiver Request Acceptable		49375305
870.5300	*In vitro* Mammalian Cell assay	Waiver Request Acceptable		49375305

Deficiencies: Waivers Acceptable

Toxicology: Trimethylamine

Summaries of mammalian toxicity values for Trimethylamine are listed in (Table 8.0) and show that this compound has an Acute Oral toxicity of LD_{50} = 460 - 766 mg/kg (Tox Category III), Acute Dermal LD_{50} > 5,000 mg/kg (Tox. Category IV), Acute Inhalation LC_{50} > 5.9 mg/L (Tox. Category IV), Acute Eye Irritation showed severe irritation, corneal damage, and bleeding (Tox. Category I), Acute Dermal Irritation showed that Trimethylamine is highly corrosive (Tox. Category I). Since the proposed use of trimethylamine as an attractant in fly traps precludes contact with skin, a waiver is requested for Skin Sensitization 870.2600.

The applicant has asked for waivers on the following studies: Acute Inhalation (870.1300) and Skin Sensitization (870.2600), Subchronic Oral (OCSPP 870.3100), Subchronic Dermal (OCSPP 870.3250), Subchronic Inhalation (OCSPP 870.3465), Prenatal Developmental toxicity (OCSPP 870.3700), Bacterial Reverse Mutation Test (OCSPP 870.5100) and *in vitro* mammalian cell assay (OCSPP 870.5375). The rationale that the applicant provided notes that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure. **The waiver rationales and acute toxicity profile for Trimethylamine are sufficient to grant waivers for the studies noted above.**

Table 8.0. Acute Toxicological Values for Trimethylamine

Guideline	Study	Results	Toxicity Category	MRID #
870.1100	Acute Oral toxicity (rat)	LD_{50} = 460 - 766 mg/kg	III	49375305
870.1200	Acute Dermal Toxicity (rabbit)	LD_{50} > 5,000 mg/kg	IV	49375305

Guideline	Study	Results	Toxicity Category	MRID #
870.1300	Acute Inhalation Toxicity (rat)	LC_{50} > 5.9 mg/L	IV	49375305
870.2400	Primary Eye Irritation (rabbit)	Severe irritation, corneal damage, and bleeding	I	49375305
870.2500	Primary Dermal Irritation (rabbit)	Highly corrosive	I	49375305
870.2600	Skin Sensitization	Waiver Request Acceptable		49375305
870.3050	90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3100	90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3250	90-Day Inhalation -rat	Waiver Request Acceptable		49375305
870.3700	Prenatal developmental	Waiver Request Acceptable		49375305
870.5100	Bacterial reverse Mutation	Waiver Request Acceptable		49375305
870.5300	*In vitro* Mammalian Cell assay	Waiver Request Acceptable		49375305

Deficiencies: Waivers Acceptable

Toxicology: Putrescent Whole Egg Solids

The EPA reviewed the Putrescent Whole Egg Solids registration in 1992 and 2012 (EPA 1992 and 2011) as part of the Registration Review and concluded that the Agency will continue to waive generic toxicology data requirements. The applicant also provided rationale that the proposed end product is a fly attractant enclosed in a water soluble pouch with no oral exposure, and only transient human exposure.

Table 9.0 Acute Toxicological Values for Putrescent Whole Egg Solids

Guideline		Study	Results	Toxicity Category	MRID #
870.1100		Acute Oral toxicity (rat)	Waiver Request Acceptable		49375305
870.1200		Acute Dermal Toxicity (rabbit)	Waiver Request Acceptable		49375305
870.1300					49375305

Guideline		Study	Results	Toxicity Category	MRID #
		Acute Inhalation Toxicity (rat)	Waiver Request Acceptable		
870.2400		Primary Eye Irritation (rabbit)	Waiver Request Acceptable		49375305
870.2500		Primary Dermal Irritation (rabbit)	Waiver Request Acceptable		49375305
870.2600		Skin Sensitization	Waiver Request Acceptable		49375305
870.3050		90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3100		90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3250		90-Day Inhalation - rat	Waiver Request Acceptable		49375305
870.3700		Prenatal developmental	Waiver Request Acceptable		49375305
870.5100		Bacterial reverse Mutation	Waiver Request Acceptable		49375305
870.5300		*In vitro* Mammalian Cell assay	Waiver Request Acceptable		49375305

Deficiencies: Waivers Acceptable

Toxicology RF2182 Dry Fly Attractant

The applicant has requested waivers for all required acute toxicity data that include the following: Acute Oral 870.1100, Acute Dermal 870.1200, Acute Inhalation 870.1300, Acute Eye Irritation 870.2400, Acute Skin Irritation 870.2500, and Skin Sensitization 870.2600. The rationale for these waivers notes that the product is intended for use in a fly trap where there is little or no potential for skin, eye, or oral exposure. The ingredients of the formulation have low toxicity or are present in low concentrations and are presented as a dry powder packaged in a water soluble pouch that is placed in the fly trap mechanism. The product is then activated with the addition of water. **The Agency agrees with this rationale for waivers.**

Table 10.0 Acute Toxicological Values for RF2182 Dry Fly Attractant

Guideline		Study	Results	Toxicity Category	MRID #
870.1100		Acute Oral toxicity (rat)	Waiver Request Acceptable		49375305
870.1200		Acute Dermal Toxicity (rabbit)	Waiver Request Acceptable		49375305
870.1300					49375305

Guideline		Study	Results	Toxicity Category	MRID #
		Acute Inhalation Toxicity (rat)	Waiver Request Acceptable		
870.2400		Primary Eye Irritation (rabbit)	Waiver Request Acceptable		49375305
870.2500		Primary Dermal Irritation (rabbit)	Waiver Request Acceptable		49375305
870.2600		Skin Sensitization	Waiver Request Acceptable		49375305
870.3050		90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3100		90-day oral toxicity (rat)	Waiver Request Acceptable		49375305
870.3250		90-Day Inhalation - rat	Waiver Request Acceptable		49375305
870.3700		Prenatal developmental	Waiver Request Acceptable		49375305
870.5100		Bacterial reverse Mutation	Waiver Request Acceptable		49375305
870.5300		*In vitro* Mammalian Cell assay	Waiver Request Acceptable		49375305

Deficiencies: Waivers Acceptable

IV) Ecological Effects

Waiver Request for Environmental Non-target Organism and Fate Data

The applicant has requested waivers for the following required studies for Indole, Trimethylamine and Putrescent whole eggs on non-target organisms: Avian Acute Oral 850.2100, Avian Dietary 850.2200, Fish Acute Toxicity 850.1075, Acute Aquatic Invertebrate 850.1010, Terrestrial Plant Toxicity 850.4100 and 4150, Nontarget Insect 880.4350. The Agency has listed some toxicity data for Indole, Putrescent Whole Eggs, and Trimethylamine that shows slight to practically nontoxic effects to avian and aquatic organisms and since the end product is packaged in pouches that are set in a trap apparatus, the potential for exposure of the Dry Fly Attractant to avian and aquatic species is not expected. The proposed use of Indole, Trimethylamine, and Putrescent Whole Eggs in the end product, RF2182 Dry Fly Attractant should not result in any ecological concern. **The Agency accepts the applicant's waiver rationale for these studies.**

Deficiencies: Waivers Acceptable

References

Central Garden & Pet Company (2014) Submission of Product Chemistry, Toxicity and Efficacy Data in Support of the Application for Registration of RF2182 Dry Fly Attractant. Transmittal of 10 Studies. 05-May-2014. **MRID 49375300**

Kifle, A. (2013) Product Chemistry of RF2182 Dry Fly Attractant & Density of RF2182 Dry Fly Attractant. Project Number: 4468, N995. Unpublished study prepared by Wellmark International. 10p. 05-May-2014. **MRID 49375303**

Mizens, M. (2013) Toxicology, Non-Target Organisms and Environmental Fate of Indole, Trimethylamine and Putrescent Egg Solids, Active Ingredients in RF2182 Dry Fly Attractant Request for Waivers of Specific Data Requirements. Unpublished study prepared by Central Garden and Pet Company. 95p. 05-May-2014. **MRID 49375305**

Mizens, M. (2013) Toxicology of RF2182 Dry Fly Attractant Request for Waivers of Specific Data Requirements. Unpublished study prepared by Central Garden and Pet Company. 115p. 05-May-2014. **MRID 49375306**

Weatherston, I.; McFadden, T. (2013) Product Chemistry of Indole, Trimethylamine, and Putrescent Egg Solids the Active Ingredients of RF2182 Dry Fly Attractant. Unpublished study prepared by Central Garden and Pet Company. 55p. 05-May-2014. **MRID 49375301**

Weatherston, I.; McFadden, T. (2013) Product Chemistry of RF2182 Dry Fly Attractant. Project Number: N995, 4468. Unpublished study prepared by Wellmark International. 60p. 05-May-2014. **MRID 49375302**

Toxnet Toxicology Data Network 2013. Trimethylamine (CASRN: 75-50-3) http://toxnet.nim.nih.gov. United States Library of Medicine.

USEPA 2011. Putrescent Whole Egg Solids Final work Plan. Registration review Case number: 4079. Docket Number EPA-HQ-OPP-2010-0726. March 18, 2011.

Wong, R.; Nguyen, J.; Moorman, R. (2013) Product Chemistry of RF2182 Dry Fly Attractant Enforcement Analytical Method. Project Number: 4422, N995. Unpublished study prepared by Wellmark International. 55p. 05-May-2014. **MRID 49375304**